

ABSTRACT

A controller module unit is disclosed which may comprise a printed circuit board having a generally flat upper surface; a plurality of controller module  
 5 connectors of a first type mounted on the printed circuit board, wherein each controller module connector may comprise: an elongated body; a plurality of first type connector elements arranged generally in alignment with the length of the elongated body; a flexible latching detent attached to the elongated body; a controller module alignment and positioning housing mounted on the printed  
 10 circuit board; the controller module positioning and alignment frame may comprise: a front wall and a rear wall, each having an interior surface a connector bay containing a respective one of the controller module connectors; a first and a second guide shelf extending generally parallel to the upper surface of the printed circuit board, the separation of each of the first and second guide shelves from each  
 15 other defining a first dimension of the connector bay; at least one guide wall extending vertically upward from each of the first and second guide shelves, the position of the at least one guide wall defining a second dimension of the connector bay for the respective connector; a controller module, that may comprise: a controller module housing having a top wall, a bottom wall and a pair of opposing  
 20 elongated walls and a pair or opposing shorter walls, and a module housing second type of connector extending from the bottom wall, the module housing second type connector that may comprise: an elongated second type connector body having a plurality of second type connector elements arranged generally in alignment with the length of elongated connector body; an elongated generally rigid latching  
 25 member extending along one side of the elongated second type connector body; with the first and second guide shelves positioned with respect to the connector bay and the respective first type connector element positioned with respect to the connector bay and the second type connector positioned with respect to the bottom wall of the module housing such that when a first one of the pair of shorter walls of  
 30 the module housing is in contact with the interior surface of one of the front and rear walls of the positioning and alignment frame, the module housing second type connector body comes into contact with one of the first and second shelves and when the second one of the pair of shorter walls of the module housing is in contact with the interior surface of the other of the front and rear walls of the  
 35 positioning and alignment frame, the module housing second type connector body enters into the respective connector bay and enables connection between the first

and second type connector elements.